

Resource Agency Evaluations

Recognize the current ecosystem is not what the species evolved in.

- Higher flow in rivers in the summer and fall to support anadromous fish temperature needs.
- Additional Fall flows in the Delta to have been shown to improve conditions for Delta smelt.

Resource Agency Evaluations

BIOLOGICAL CONCEPT --Improve instream conditions in the Sacramento and Feather Rivers to better support salmonid smolt rearing and migration during the Spring period.

MECHANISM--Release a higher percentage of unimpaired flows below reservoirs during the Spring to better inundate backwater and bank/vegetation areas to improve conditions for migration/emigration (Aligns with Proportional Reservoir Release Approach)

CONSIDERATIONS - River and Delta have been intensely altered over time. Natural flows would not be able to flow over the landscapes fish originally evolved in. These new distributions require elevated summer flows to keep many rivers sufficiently cool for successful reproduction.

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BIOLOGICAL CONCEPT --Improve survival of salmonid juveniles and smolts, and pelagic species associated with Steamboat, Sutter and Miner sloughs from December through June. Unidirectional flows are important in relation to salmonid smolt travel time, predation and moving "particles" appropriately.

MECHANISM--Apply various flows at Hood during this period to evaluate more improved conditions aligning with research showing 15,000 cfs is necessary to achieve positive unidirectional flows in adjacent sloughs in the North Delta.

CONSIDERATIONS - Appropriate bypass flows will be important considering the 5 diversions, associated fish screens and degree of exposure time. Additional Hood Bypass "pulse flows" could improve passage success even during periods in dry years when Yolo Bypass is not flooding.

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BIOLOGICAL CONCEPT --During the Spring period (April/May), improve chances for San Joaquin River salmonid survival and rearing and transport conditions for Delta smelt larvae.

MECHANISM--Use dual conveyance to provide very low south of Delta exports during the Spring (especially in April and May).

CONSIDERATIONS - This assumes implementation of mechanisms to reduce predation and improve channel conditions in the south Delta.

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BIOLOGICAL CONCEPT --Address water quality/contaminant concerns in the south/central Delta during the summer months to possibly improve the toxic conditions of food organisms, reduce survival of nonnative predatory fish species and reduce eutrophication and mycrocystis blooms.

MECHANISM--During the summer period (July-September) increase diversions from south Delta and decrease diversions from north Delta.

CONSIDERATIONS - Longer residence times favors nuisance algae. There would need to be trade-off evaluations (monitoring/adaptive management) for this concept.

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BIOLOGICAL CONCEPT --Improve Delta smelt habitat in the western Delta during the late summer/fall period.

MECHANISM--During wet and above normal years provide a pulse flow at Rio Vista

CONSIDERATIONS - River and Delta have been intensely altered over time. Natural flows would not be able to flow over the landscapes fish originally evolved in. These new distributions require elevated summer flows to keep many rivers sufficiently cool for successful reproduction.